

Background Information to Develop Education and Outreach Materials with the Gulf States on Measurement Guidelines for Gray Triggerfish

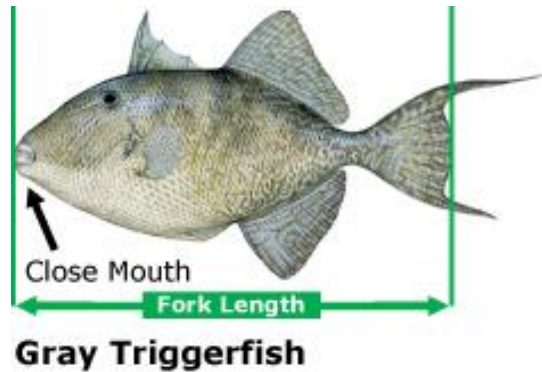


Image courtesy of Florida FWC Commission

Issue

A large number of undersized gray triggerfish are landed by both the recreational and commercial sectors of the Gulf of Mexico reef fish fishery (Figures 1 and 2). Recreational landings of gray triggerfish from 2009-2011 were compared by percent landings in 1 inch size increments by state (Figure 1). This information mirrors the results of the recent update assessment on gray triggerfish (SEDAR 9 Update 2011) which determined that landings in the eastern Gulf (west Florida and Alabama) are greater than the western Gulf (Mississippi, Louisiana, and Texas). Based on intercepted recreational landings from 2009-2011¹, the following percent of landed fish were recorded as undersized for each state: 35% west Florida (n=1,624), 28% Alabama (n=627), 100% Mississippi (n=3), 32% Louisiana (n=22), and 83% Texas (n=174) (Figure 1). A similar trend was seen in the percent of undersized gray triggerfish in commercial landings from 2009-2011: 26% west Florida (n=1,511), 21% Alabama (n=192), and 44% Louisiana (n=32) (Figure 2). Texas and Mississippi are not included in this list because there were no commercial landings recorded for Texas² and only one gray triggerfish was intercepted in Mississippi.

¹ The current 14-inch fork length minimum size limit was not effective until August 4, 2008.

² Although Texas reported low landings of gray triggerfish, the number of trip intercept program samplers was also low (Southeast Fisheries Science Center 2012).

Background

Historically, gray triggerfish were managed based on total length in the Gulf of Mexico. Since the implementation of Amendment 30A on August 4, 2008 (GMFMC 2008), gray triggerfish are now managed in federal waters by a minimum size of 14-inches fork length (FL). With the exception of Texas, all the Gulf states use the same minimum size limit (Table 1). Gray triggerfish regulations for Texas are based on total length (TL), with a current minimum size limit of 16 inches TL. This is approximately equivalent to a 14-inch FL minimum size limit (Table 2). Another point of confusion that may exist among Florida fishermen is the South Atlantic regulations (east coast of Florida) maintained the 12 inch TL minimum size limit for gray triggerfish.

Minimum size limit regulations based on total length could bring about confounding issues for this species based on the long filaments extending from the caudal-fin rays, that when squeezed together could extend the estimated total length of the landed species (Matsuura 2002; Robins et al. 1986). This is why federal regulations were changed from fork length to total length. It is possible that most fishermen still do not know that both the size limit has increased and measurement guidelines have been modified from total length to fork length.

Another factor that may be contributing to the landings of undersized gray triggerfish may be species identification, potentially confusing them with ocean triggerfish. This is particularly important for fishers in the western Gulf and south Florida where ocean triggerfish are more common (Randall 1968; Robins et al. 1986), but rarely landed. Although ocean triggerfish are less common in the fishery compared to gray triggerfish, there are currently no regulations on ocean triggerfish. Fishers may think they have caught an ocean triggerfish, but in reality, they have caught a gray triggerfish. If a MRIP sampler intercepts the fisher, the fish would be recorded correctly as a gray triggerfish.

Table 1. Minimum size limit regulations by state for gray triggerfish.

State	Gray triggerfish minimum size limit
Florida	14 inches fork length
Alabama	14 inches fork length
Mississippi	14 inches fork length
Louisiana	14 inches fork length
Texas	16 inches total length

Table 2. Predicted weights of Gulf of Mexico gray triggerfish using weight-length parameters from Ingram (2001). The current minimum size limit in the Gulf of Mexico is 14 inches FL.

Fork Length		Total Length		Weight	
millimeters	inches	millimeters	inches	kilograms	Pounds
305	12	352	13.9	0.65	1.43
330	13	382	15	0.83	1.82
356	14	412	16.2	1.03	2.28
381	15	442	17.4	1.27	2.80
406	16	473	18.6	1.55	3.41

Source: Ingram (2001) and SEDAR 9 Update (2011).

Goals and Objectives

In the Gulf of Mexico, gray triggerfish were declared overfished and experiencing overfishing in both the benchmark assessment and the most recent update assessment (SEDAR 9 2006; SEDAR 9 Update 2011). By landing undersized gray triggerfish, the recovery of the stock will be delayed. Therefore, the public's understanding of this issue is important to rebuilding the stock.

To assist in the recovery of the stock, staff from each Gulf state, NOAA Fisheries Service's Southeast Regional Office, and the Gulf Council need to collaborate with the goal of increasing gray triggerfish regulatory compliance by fishers. Given the above background information, staff can work to:

- Improve education and outreach about gray triggerfish and the associated regulations.
- Provide materials to avoid misidentification between gray triggerfish and ocean triggerfish.
- Inform law enforcement personnel of this issue.

By undertaking these activities, the percent of undersized fish in the harvest should decline and the ability of the stock to recover should improve.

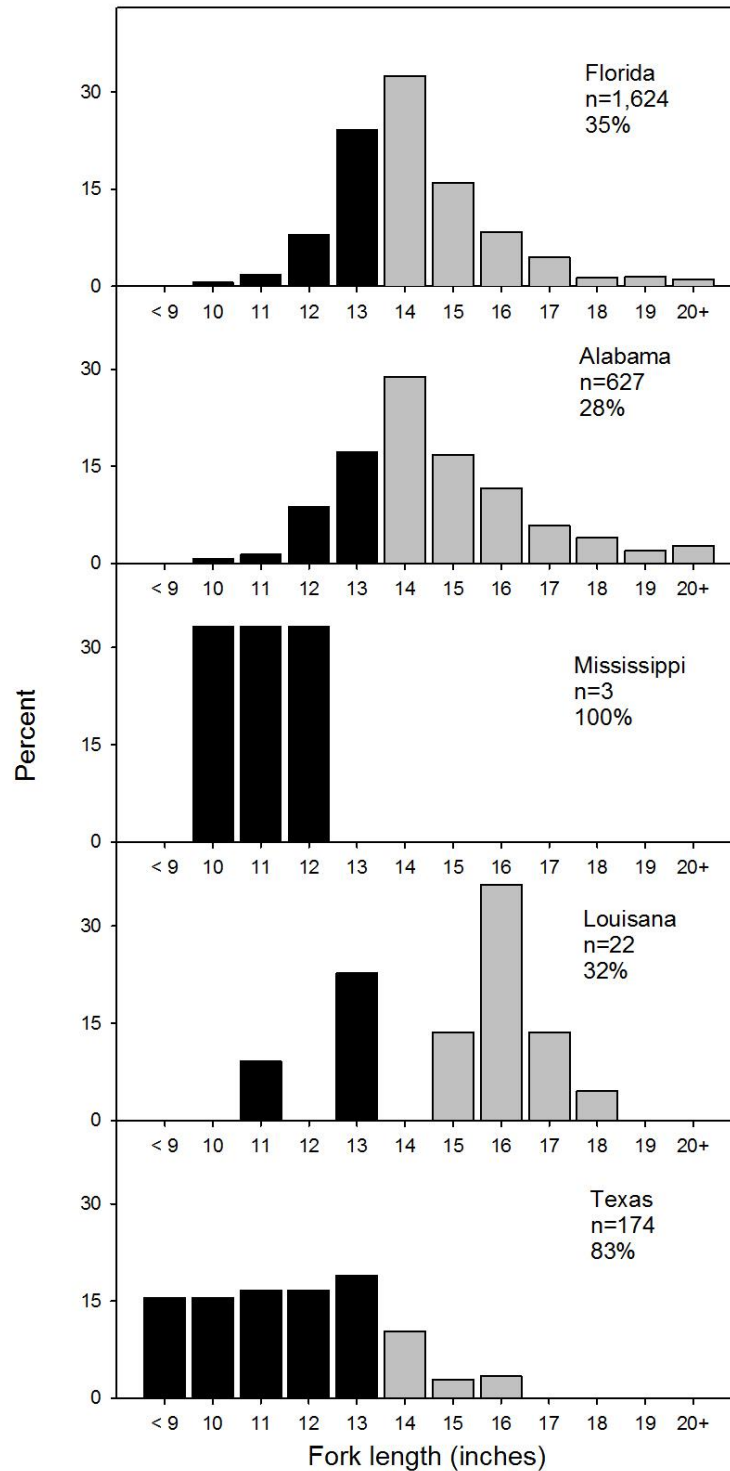


Figure 1. Percent of Gulf of Mexico recreational gray triggerfish lands from 2009-2011 in 1 inch fork length size increments by state. Landings include Marine Recreational Fisheries Survey and Statistics (MRFSS), headboat survey, and Texas Parks and Wildlife Department datasets. Black bars show the percentage of gray triggerfish that are undersized (less than 14 inches FL) and the gray bars show the percent of gray triggerfish that were 14 inches or greater. Source: SERO 2012.

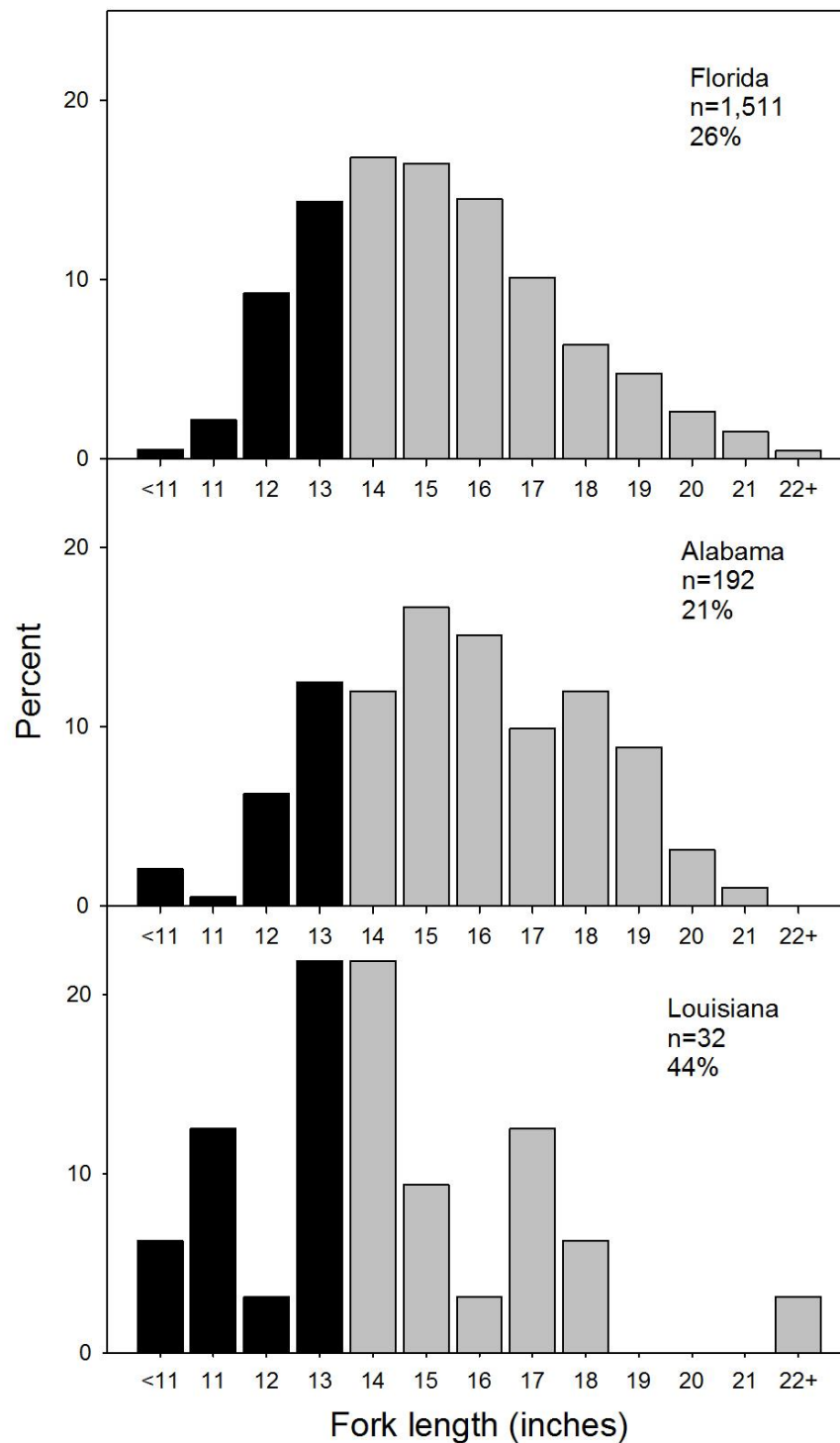


Figure 2. Percent of Gulf of Mexico commercial gray triggerfish landings from 2009-2011 captured in the Trip Intercept Program (TIP) dataset in 1 inch fork length size increments by state. One gray triggerfish was landed in Mississippi therefore the total number of fish intercepted was 1,736. Black bars show the percentage of gray triggerfish that are undersized (less than 14 inches FL) and the gray bars show the percent of gray triggerfish that were 14 inches or greater. Source: SERO 2012.

Efforts initiated by Gulf Council staff

Created a blog - <http://gulfcouncil.blogspot.com/>

Discuss in the Council newsletter and discuss on facebook.

References

Ingram, G. W. Jr. 2001. Stock structure of gray triggerfish, *Balistes caprisкус*, on multiple spatial scales in the Gulf of Mexico. Doctoral dissertation. University of South Alabama, Mobile.

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Robins, C.R., G.C. Ray, J. Douglas, R. Freund. 1986. Peterson field guides Atlantic coast fishes. Houghton Mifflin Company, Boston.

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SEDAR 9 Update. 2011. SEDAR update stock assessment of gray triggerfish in the Gulf of Mexico. Southeast Data, Assessment and Review. North Charleston, South Carolina. <http://www.sefsc.noaa.gov/sedar/>.